READY, WILLING AND ABLE: AN UPDATE FOR CLINICIANS ON EVIDENCE-BASED STRATEGIES TO STRENGTHEN MENTAL HEALTH AND BEHAVIORAL CAPACITY FOR PUBLIC HEALTH PREPAREDNESS

Host: Loretta Jackson-Brown

Moderator: Dr. Mary Leinhos

Presenters: Jonathan M. Links, PhD; Daniel J. Barnett, MD, MPH; O. Lee McCabe, PhD

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Operator (Brenda): I will now turn the call over to your host today, Loretta Jackson Brown.You may begin.

Loretta Jackson Brown: Thank you, Brenda. Good afternoon. I am Loretta Jackson Brown and am representing the Clinician Outreach and Communication Activity (COCA) with the Emergency Risk Communication branch at the Centers for Disease Control and Prevention. I am delighted to welcome you to today's COCA webinar, Ready, Willing, and Able: An Update for Clinicians on Evidence-based Strategies to Strengthen Mental Health and Behavioral Capacity for Public Health Preparedness. We are pleased to have with us today, three subject matter experts from the John Hopkins Preparedness and Emergency Response Research Center, here to discuss their research related to the opportunities for enhanced collaboration between local health department leaders and faith-based leaders and building community preparedness for disasters.

You make participate in today's presentation by audio only, via webinar, or you may download the slides if you are unable to access the webinar. The PowerPoint slide set and the webinar link can be found on our COCA webpage at emergency.CDC.gov/COCA. Click on COCA calls. The webinar link and slide set can be found under additional call information.

Here to provide an introduction to navigating today's webinar is Miss Callie Campbell. (00:01:29)

Callie Campbell: Hello. My name is Callie and I am going to walk everyone through the tools available. This webinar should last approximately an hour. If you have a question for one of the

presenters, you may use the Q&A button located at the top left portion of your screen. Type in your question and hit enter to send your question to the presenter. If you are addressing a specific presenter, please state that in your question. Presenters will read selected questions out loud to the group. At the top right-hand side of your screen you will be a feedback tool that has a colored square next to it. If you select the drop-down arrow next to the Feedback, you can alert me if you are having trouble hearing or if you need help. This meeting is being recorded. If you have technical difficulties at any time during the presentation, you may call our technical support line at 1877-283-7062. Thank you all for coming. Loretta Jackson Browne is your host and she will be taking over the presentation from here. (00:02:22)

Loretta Jackson Brown: Thank you Callie. At the conclusion of today's session, the participant will be able to:

- o Describe key influences affecting the willingness of healthcare providers to respond to public health emergencies
- o Describe how a threat-and efficacy-based model can inform approaches to boosting health providers willingness to respond to public health emergencies
- o Identify the five components of the Johns Hopkins Model of Psychological First Aid Training for Paraprofessional Disaster Volunteers
- o Describe three major ideas proposed by representatives of local health departments to sustain project-initiated, disaster preparedness relationships with faith-based organizations

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Our moderator for this webinar is Dr. Mary Leinhos. Dr. Leinhos is a scientific program official for the Extramural Research Programs in the Office of Public Health Preparedness and Response at the Centers for Disease and Prevention. She serves as project officer for four of the Emergency Response and Preparedness centers. Prior to that, she was involved in several activities related to emergency preparedness at CDC including planning and executing workshops on genomics and acute public health investigations, providing Emergency Operations Center ethics coverage desk and input during the pandemic influenza exercise in the May 2009 H1N1 response, and providing guidance for protection of human subjects and regulatory compliance in investigations related to emergency response.

Again, the PowerPoint slide set and webinar link are available from our COCA webpage at emergency.cdc.gov/COCA.

At this time, please welcome Dr. Leinhos. (00:04:56)

Dr. Mary Leinhos: Thank you Loretta and hello, everyone. My name is Mary Leinhos. Let me introduce today's presenters. They come from one of nine CDC funded Preparedness and Emergency Response Research Centers or PERRCs as we call them, that conduct research to evaluate the structure, capabilities, and performance of public health systems for preparedness and emergency response.

The first seven PERRCs were funded in 2008, including the one at Johns Hopkins. An integral part of the work of these centers is to help translate study results to public health practice. PERRC research directly benefits federal, state, local, and tribal public health preparedness and response activities. All PERRC research is focused on identifying the most critical elements needed to enhance preparedness for all hazards and to close gaps in public health preparedness and response services.

Our first presenter today from Johns Hopkins University will be Dr. Jonathan Links. Dr. Links is currently professor and Deputy Chair of the Department of Environmental Health Sciences in the John Hopkins School of Public Health with joint appointments in radiology and emergency medicine and a secondary appointment in the school of education. Dr. Links directs the PERRC as well as the Preparedness and Emergency Response Learning Center which is a CDC funded cooperative agreement focusing on training and professional practice in public health preparedness. Dr. Links is also Deputy Director of the Office of Critical Event Preparedness and Response which is responsible for all disaster planning for both the Johns Hopkins University and help system. (00:06:34)

Our second presenter today from Johns Hopkins will be Dr. Daniel Barnett. Dr. Barnett is the Assistant Professor in the Department of Environmental Health Sciences at the School of Public Health. His research interests include best practice models to enhance all hazards, public health emergency preparedness and response. Specific areas of focus for Dr. Barnett include design and evaluation of public health preparedness curricula, personal and family emergency preparedness planning, pandemic influenza readiness and response, and vulnerable populations in emergencies. (00:07:11)

Our third and final presenter today will be Dr. Lee McCabe. Dr. McCabe is a board certified psychologist with faculty appointments in the Johns Hopkins Department of Mental Health in the School of Public Health and in the Department of Psychiatry and Behavioral Sciences at Johns Hopkins School of Medicine. His current research interest is the field of disaster behavioral health. Dr. McCabe also served as the Director of the Office of Behavioral Healthcare at Johns

Hopkins and he is a member of the editorial boards of both the American Journal of Disaster Medicine and the International Journal of Emergency Mental Health. (00:07:50)

I now would like to welcome Dr. Jonathan Links to take the line and kick off the presentation for today's webinar.

Dr. Jonathan Links: Welcome, everyone, John Links here. My colleagues Dan Barnett, Lee McCabe and I welcome you to our webinar. The overarching theme of our webinar is Ready, Willing, and Able. What we are going to talk about is evidence-based strategies to strengthen mental health and behavioral capacity in the context of public health preparedness.

What I would like to do is very quickly set up the problem and a little bit of our thinking and then have my colleagues describe two of our main projects as we try to grapple with this particular challenge. The challenge that we are focusing on is the fact that experience in the United States and other countries has shown repeatedly that following disasters, the surge of demand for health services to treat psychological symptoms is much greater than for services to treat physical injuries.

That is to say, if we think of the concept of dysfunction, we can have either physical trauma and injuries leading to dysfunction, or mental or psychological trauma leading to dysfunction. What we are focusing on here is the psychosocial effects of disasters and mental and behavioral health issues.

A moment ago, I alluded to an overarching framework that we use in all of our work, ready, willing, and able. This commonplace phrase has not before us been used in a formal way to define what it means for an individual, an agency or hospital, and a jurisdiction, to be prepared. The way that we conceptualize it is that each of these three constructs, ready, willing, and able, represent three different overlapping domains. Able, which Websters defines as "having sufficient knowledge, skill, or ability" is the domain with which all of us are most familiar, because we all focus on the acquisition of knowledge, skills, and abilities in the execution of a response to a disaster situation. (00:10:36)

We have extended our thinking and our research to two other equally important domains or constructs. The first is willing, which Websters defines as "inclined or favorably disposed in mind." Where as you might think of able as mainly involving the cognitive domain, willing involves the affective domain. The final construct is ready which Websters defines as "poised to respond" which we take to mean infrastructure, systems, policies, and procedures and so on. (00:11:18)

By thinking about preparedness in these three domains, we are able to ensure that no critical factors or processes are left out of our thinking in terms of getting to the goal of a quality response to a disaster. So, the way that we think about preparedness is to enlarge the area of each

of these three circles as much as possible and to maximize the overlap of these three circles. It is only in that intersection of ready, willing, and able that you are guaranteeing a quality response. (00:12:00)

So, with that, I would like to turn the webinar over to my colleague, Dan Barnett, who is going to focus on the willing domain and talk to you about willingness to respond in public health emergencies. (00:12:21)

Dr. Daniel Barnett: Thank you, John. It is a pleasure to be with you today. I will talk about, as John mentioned, willingness to respond which is one of the three components of the ready, willing, and able model. This is an area that frankly has been under addressed historically in the disaster research literature. It is extremely important part of response because the attitudinal dimension can have a significant impact on surge capacity for clinicians and other responders. (00:12:51)

First I would like to distinguish willingness versus ability. There has been a growing body of research on willingness to respond among a variety of cohorts that has pointed to certain key themes. First of all, willingness is what we define as being exposed in mind, either individually or collectively toward specific responses. Very importantly, willingness to respond has been found to be a scenario specific phenomenon. In other words, an individual's willingness to respond to a hurricane may not necessarily equate to that same individuals willingness to respond to a radiological terrorism incident. It is important to keep that in mind in the context of what I will be discussing today. Importantly, nationally preparedness training has focused virtually exclusively on the ability piece of the ready, willing, and able model. There has been a tacit assumption that if we train people to recognize a given sign or symptom, they will necessarily come to work to do that, in fact. That is a false assumption based on the research we have conducted and others have conducted. And, it is important to remember that willingness and ability are conceptually and functionally distinct. There have been surveys off a variety of health cohorts where they ask, would you be willing to respond versus would you be able to respond. And the percentages are hardly ever the same. In a number of instances, the percent who say they are able to respond exceeds the percentage of willing to respond. (00:14:26)

I would like to talk briefly about our own centers background in looking at this question. Prior to our being a Preparedness and Emergency Response Research Center, we were a CDC center for public health preparedness. Our primary mission was to train members of the public health workforce in a variety of disaster readiness domains. We found time and again that our audiences would come to us with questions such as, "what is my specific role" and "why do I matter in a response?" That prompted us to study this explicitly. In 2005, prior to Hurricane Katrina, we conducted a pilot study in three counties in Maryland, asking everyone in these agencies, would you be willing to respond to a pandemic influenza event? At that time, the biggest concern was H5N1 and it is still a concern. We found some very interesting observations. Most importantly,

we were surprised by the factor that was the most significant in terms of willingness to respond. We thought the single most important modifier of response willingness would be whether someone was concerned about their own or their families safety. But, that actually was not the case. We found that the most important modifier of response willingness was how important that individual perceived his or her role to be in the overall health departments response. That is significant because one can think that they are marginal in the agency's response and be factually wrong about that. And at a time when we have fiscal austerity and cutbacks in a variety of municipal agencies, it is critical that we have an all hands on deck mentality at local health departments as well as hospitals and other parts of the emergency response infrastructure. (00:16:23)

We also found significant gaps in perceived knowledge and perceived ability to communicate risk about that threat.

When we published our findings from that pilot study, we received a lot of interested inquiries from other agencies wanting us to survey their cohorts willingness to respond. We developed a survey tool that I'll talk about in a bit to gauge this in a systematic way.

I want to highlight a few recent findings that we obtained regarding hospital workers willingness to respond. Again, this goes back to my earlier point that willingness to respond is a scenario specific phenomena. We surveyed workers at a large tertiary care hospital in Baltimore. I will let you guess which one that is. We found that 32% of surveyed hospital workers were unwilling to respond to an influenza pandemic regardless of severity. That is a very significant chunk of hospital workers. The response rates were consistent across departments. Interestingly for clinicians, it was one third lower among nurses compared to doctors. (00:17:33)

The response rates were even more concerning for a radiological dispersal device, more commonly known as a dirty bomb, which is actually one of the US planning scenarios, and in our survey of the same hospital, we found that about half of the hospital workers indicated they would be unwilling to respond to such an event regardless of severity. These are concerning findings at a time when we have very limited search capacity to begin with. There was an Institute of medicine report about four years ago which highlighted how much or how limited the search capacity is in the United States at hospitals and other parts of the response infrastructure. (00:18:11)

I want to move on briefly to talk about the current work we are doing in conjunction with CDC as part of the Preparedness and Emergency Response Research Center to look at willingness to respond in a systematic way. We are studying willingness to respond in local health departments across the United States. We have 71 health departments involved in our study. They are divided into four clusters of contiguous or proximate health department jurisdictions. Four of these are urban and for are rural. They are very geographically diverse as you can see. We use a tool to

gauge willingness to respond called the Johns Hopkins public health infrastructure response survey tool, or JHPHIRST. Importantly this survey uses perceptions of threat and efficacy as the basis for its question design. There is a model that we use called the extended parallel process model. I am not going to get into a lot of theory today, but it is available as an additional resource courtesy of CDC. We appreciate that, some background articles. Basically, the idea is that to get someone to be responsive in an ideal way toward a given threat you have to convince them of the legitimacy of the threat and the efficacy of the intervention to address it. This has been a very powerful model we found to understand root determinants and willingness to respond. In this survey, we asked about willingness across four representative scenarios within the all hazards spectrum, a weather related emergency, a pandemic influenza event, a radiological dirty bomb attack, and an inhalational anthrax bio-terrorism attack. (00:19:51)

Basically, the study designed is one in which we deliver a survey at baseline to these jurisdictions. We randomly divide these jurisdictions into an intervention arm which gets a pilot curriculum that I'll talk about in a bit, versus a control arm that does not get that curriculum. They do get it at the very end of the research however. We resurvey using this instrument at three various periods post intervention to gauge short, medium, and longer term programmatic impact on willingness to respond. (00:20:25)

I want to highlight a few data trends that are relevant to clinicians based on the work we have done so far. I mentioned earlier that willingness to respond is scenario specific. If you divide this table in half, basically left to right, you will see that willingness to respond is lower for terrorism or more exotic scenarios, than for naturally occurring scenarios. It also matters in terms of context whether one considers themselves required to respond or asked but not required to respond. So, when one is required to respond in any of these scenarios, the rates are always highest for that scenario. When given the option to respond, we would like you to show up, but we do not require it, the rates are lower. Importantly, there is a significant gap we have observed, without exception, that willingness to respond to a radiological event is by far the lowest among all of the various scenarios we have studied. I should highlight that these data come from health department wide cohorts, but the findings have been the same in terms of statistical significance. There has been no difference between clinicians and other members of the health department staff. This is as relevant to clinicians as it is to non-clinicians. (00:21:44)

I also wanted to highlight some interesting jurisdictional trends that we have observed based on our research so far. We found that willingness to respond is higher in rural local public health jurisdictions than urban ones. This is an area that is ripe for future research. We are interested in understanding the social cohesion or other sociological variables that may determine jurisdictional differences in response willingness rates. (00:22:13)

This is a slide that highlights what we found so far from our research to be the most important modifiers of willingness to respond among healthcare providers. I have highlighted a number of

these items in bold because they are very important to keep in mind. The most influential modifier of response willingness is what we call self-efficacy. Basically, this is the confidence that you can perform a certain function effectively. Also, we found that perceived importance of one's role in the overall healthcare institution is extremely important. Again, one's perception may not equate with reality. One may think that he or she has a marginal role in response where in fact that individual has a very important role. Perceived safety at work is a critical factor in influencing willingness to respond. We found consistently that individuals who perceive that their worksite is not looking out for their safety are much less likely to be willing to respond than those who are. Finally, psychological support is critical as a modifier of response willingness. If you had to pick one profile of the worker at your hospital or healthcare institution who is most likely to be willing to respond, based on the research, we found that that individual will fit a profile called concerned and confident. Where they have an appropriately high perception of the threat at hand coupled with a high perception of efficacy that they can manage that threat effectively. That concerned and confident profile is what we are aiming for in terms of our training intervention that I will talk about momentarily. (00:23:49)

So, this intervention is called the public health infrastructure training. We don't tip our hand in terms of calling it a willingness training. In fact, this is designed intentionally to look like any training, but it is very different than other training. In that we actually focus on willingness as a discrete, attitudinal outcome. So basically, this is a cognitive intervention with an affective or behavioral desired outcome. Our goal is to increase the numbers of individuals who are willing to respond to all hazards and increase the proportion of individuals who fit that concerned and confident profile. It basically is a modular curriculum that is tailorable to any individual jurisdiction. We use the baseline assessment to inform the curricula components. It comprises seven hours of content delivered over a six month period of time and it uses a blended learning approach ranging from face-to-face discussion, online learning, group activities including tabletop exercises, etc. (00:24:54)

Briefly, as a table of contents, this is a train the trainer curriculum I should mention. That has been a very useful format we have found in these health departments. In the first part of the curriculum, we provide an overview of the four scenarios, the trainer does, and public health's role in responding to them. It is a discussion-based session to elicit the workers perceptions of insecurities they might have about responding to those scenarios and other factors that could impede response. The second portion of the curriculum is a series of independent learning activities including online module's, for example relating to risk communication on mental health and self-care issues, as well as activities including mapping out multiple routes to work and making a personal and family preparedness kit which historically has been a very, how shall I say that, it has not been strong among the public health workforce, let's put it that way. Finally, we conclude with a group experiential learning activity which includes a tabletop exercise and a

role-playing exercise, involving risk communication, to solidify the elements of the previous parts of the curriculum. (00:26:11)

This is modular in design. It turns out that all of the health departments we have looked at have had very similar gaps in willingness to respond. And so, de facto, we have had a very similar curriculum outlay for these health departments as a result. This is intended to be fun, interactive. These are screenshots from, or photos from trainings that we've conducted in Florida and other jurisdictions. It is a teambuilding activity. We have gotten very positive feedback from these organizations about the curriculum. (00:26:46)

This is one of the independent activities. This comes from Wisconsin's cluster. If you look closely, this is actually mapping multiple routes to work and if you look very closely on the right side, someone has written "help me" on the map. We don't mind if people have fun with this part of the curriculum as long as they do the requisite elements and clearly they have here. Similarly, there is a personal preparedness kit and we have based the personal preparedness kit guidelines on the American Red Cross guidelines. This person included some additional items which I'm not going to discuss here. (00:27:25)

Finally, we have success stories to date that we are pleased to be able to report. There was some very serious flooding in Poplar Bluff Missouri area earlier this year. One of our clusters, as it turns out, has a health department based in that community. We received very positive feedback from their health officer about the relevance and utility of the curriculum in terms of how it helped his agency marshal their response to this event. We also received very positive feedback from the Public Health Preparedness Summit. People came up to us after we presented at the town hall session, wanting to find out more about this kind of curriculum and it's adaptability to other sectors of the response infrastructure. Finally, we conducted a training at a local health department in Maryland entitled <u>Factors That Influence Willingness to Respond and What The Health Department Can Do About It</u>. This group subsequently produced a newsletter where they described the elements of the ready, willing, and able model and highlighted the importance of the willingness in the context of this model. We feel that this curriculum is highly adaptable to a variety of healthcare settings and in fact that is one of our longer-term goals, is to modify and tailor it not just for health department, but for hospitals and other places where clinicians practice. (00:28:47)

With that, I want to highlight one final slide, highlighting the impact of the curriculum so far. Basically, this slide highlights that in the intervention arm of our clusters, we have seen an increase in willingness to respond. I should mention that this curriculum specifically focuses on the scenario which had the lowest baseline rate of willingness which happened to be the dirty bomb scenario. There was significant increase in response willingness regardless of severity. It is always encouraging in research when the control arm goes down and the intervention arm goes up and we have observed that here. These are initial findings. We'll need to see what plays out in

subsequent analysis but so far we have been very pleased by the programmatic impact. With that, I will turn this presentation over to my colleague, Dr. Lee McCabe. (00:29:38)

Dr. Lee McCabe: Thank you, Dan. Hello, everyone. This first slide is our attempt to capture the three essential components of our project. Working within the framework of three-party collaboration of faith-based organizations, local health departments, mainly emergency planners in local health departments, and an academic health center, in this case Johns Hopkins University, we are attempting to refine and validate two companion interventions. These players, in effect, are engaging in these activities to accomplish the overarching aim of developing an evidence-based model for enhancing public health emergency preparedness in general with particular focus on mental and behavioral health. The interventions we are exploring and validating are motivational preparedness training, and as you will see, something we call guided preparedness planning. MPT is essentially psychological first aid training and embedded in a general disaster mental health literacy curriculum. Our hypothesis is that it not only will likely encourage people to respond to the disaster behavioral health needs of their community as first responders, as you will, as PFA providers, but also we found, somewhat serendipitously, that it also encourages them to plan on behalf of their community. (00:31:37)

The second intervention, as I mentioned, is referred to as guided preparedness planning. We hypothesized that this intervention which is, as PFA is, a day-long workshop following more or less the format of a CME or CEU workshop, is designed to encourage willingness and ability to support planning efforts generally for their congregation and community. It is followed, if necessary, by two half day technical assistance workshops, often several weeks or up to a month or two following the day-long training. (00:32:30)

This slide outlines the basic core content of our psychological first aid training program. Essentially, we begin and carry through the training an emphasis on the importance of basic communication skills. We refer frequently to the hundreds of studies that show that it is essentially how you behave in a particular helping session or context as a person as a communicator that carries most of the therapeutic freight, than say, any particular technical skills that you have. In terms of our assessment, that is a brief screening where we deemphasize clinical or pathological orientation in favor of determining functional impairment or prospects of functional impairment. (00:33:34)

With respect to interventions, we make no effort to teach psychotherapeutic or crisis intervention skills as might be more suitable in another setting, but more support guidance and the term that we often see in the literature, is more a ministry of presence. (00:33:56)

In an effort to further emphasize that we are not teaching psychotherapy, we use this slide to compare and contrast the care intensity continuum of psychological first aid versus physical first

aid. An analogy might be, physical first aid is to surgery as psychological first aid is to psychotherapy. (00:34:23)

This is an example of our effort to impart general disaster mental health information. These are risk factors for adverse outcomes following different public health emergencies of different intensities. Essentially, we organized the research into before the event, during the event, and after the event factors. Time doesn't permit getting into too much detail here, but let me emphasize pre-event that a very important predictor of bad outcomes is a person with a history of psychiatric diagnosis or treatment as an antecedent of the disaster. In terms of peri-event factor, dosage of exposure, especially exposure to particularly traumatic scenes, gruesome images of long duration is a very powerful predictor of adverse outcome. (00:35:29)

We attempt to use pedagogical devices of different kinds including the use of acronyms to help encourage recall of material. Here the acronym trauma and the words that we use for these six letters reflect almost perfectly the actual algorithm or criteria in DSM-IV PTSD. Similarly, for suicidal behavior and warning signs thereof, we use the acronym IS PATH WARM. These 10 signs are associated, not individually necessarily with suicidality, but in combination are powerful predictors of suicide. When I am personally doing training or I am a co-trainer, I emphasize, based on my own clinical experience, the power of two of these, namely hopelessness and substance abuse, as an especially lethal combination. Hopelessness is the kind where there is a sense of no exit to the suffering combined, in particular, with alcohol use. Alcohol tends to be an inhibitor of the inhibitors of the suicidal behavior. (00:37:05)

Here are arrayed some data that reflect pre-post changes in knowledge and skills. We don't just evaluate our interventions with post only evaluation methodology. We actually use written tests to see if the knowledge and skill acquisition has actually occurred. And we subject the pre-post change scores to statistical testing. As you can see, on these component skills of PFA there were significant changes in all of them. I have highlighted here, in particular, psychological first aid self-efficacy, Bandura's concept of perceived self-efficacy has been shown to be an extremely effective predictor of actual behavior in an in vivo situation across many, many different settings, including psychological first aid. (00:38:09)

This table reflects one cohort, percentage of PFA completers that at the end of the day completed an application to be a member of Maryland's medical reserve corps, known as the Medical Professional Volunteer Corps. The significance of these data don't lie just in the absolute or relative numbers, but also the fact that before the project, the Maryland medical reserve corps did not permit as paraprofessional volunteers, member of the clergy or others who were not holding an actual health professional degree. As a consequence of our work, the Maryland Department of Health and Mental Hygiene now accepts project qualified applicants into the corps. (00:39:11)

This slide details the actual curriculum and the outline of the plans that are the product, the intended product of our day of training. We try to end our seven-hour training day with every person who is a deployed or designated planner for their faith organization, to have them leave in hand with a basic disaster preparedness plan. The key content, we feel, is identifying the leadership roles and responsibilities for their particular community, and that each role corresponds with the roles of the incident command system. We ask not only for the designated team of planners to identify a person by name and contact information that will be the lead person, but also first and second backups. Another vital piece of content in the planning process is to conduct a SWOT analysis where disaster related strengths, weaknesses, opportunities, and threats are identified in the plan for each planning community. (00:40:37)

This is an example taken right from our plan evaluation tool which covers the 50 items that constitute a completed plan. So17 through 20 represents the respective strengths, weaknesses, opportunities, and threats that might have been identified and are completed in the plan or partially completed. And 21 represents a very important concept that we are trying to capture and that is the identified strength of a given community that exists in such abundance, such surplus that they might be available for other communities in the county or jurisdiction. (00:41:26)

This is a map of work we have done in one county, Kent County Maryland, that as you can see is on the eastern shore of Maryland with the Chesapeake Bay posing a threat during violent weather events. As you can see, 11 congregations participated in this planning process that occurred in Chestertown, Maryland. And you can see through these Google bubbles the geographic spread that we were able to attain in training one day and then two subsequent technical assistance sessions. (00:42:07)

This slide summarizes very recent work beyond Maryland in Iowa, that was arranged by the Episcopal diocese of Easton, Maryland and the National Disaster Program of the Episcopal Development and Relief Organization. Seven parishes attended meetings set up through contacts on the ground in Iowa. All seven parishes completed a plan that day. There were no subsequent TA sessions needed and the average score, mean score, was 90% on those plans with a median score of 95.5. (00:42:53)

The next slide captures the geographic spread of that initiative that we did about two months ago.

So, that in essence is the project. We know that we will be fading as a partner from the other two partner alliances that we were able to foster. We have recently asked government partners to generate ideas for sustaining their partnerships with the faith organizations in their jurisdictions. This is a sample of ideas that they plan to implement such as quarterly meetings with the clergy, actually engaging as a partner in exercises and drills of the FDOs and other emergency management and preparedness agencies being introduced to each other. And, the local health department through their outreach workers trying to recruit other faith organizations. Generally,

the ultimate in a firm alliance of a durable nature would be captured in a codified memorandum of understanding. (00:44:11)

So, all told, where we are after three years of work, is that we feel like we have got the foundation through these two interventions, for a model of enhancing emergency preparedness capacity and competence that have multiple levels of the public health system.

Thank you very much. I would be glad to answer any questions along with John and Dan. (00:44:36)

Dr. Mary Leinhos: Hello, this is Mary again. Let me take this opportunity to thank our presenters from the Johns Hopkins University Preparedness and Emergency Response Research Center for sharing some of their findings today with us regarding mental health and behavioral capacity for public health preparedness. At this time, we would like to open the lines, the phone lines for questions from callers as well as invite folks to submit questions using the Q&A function on the webinar. Let me momentarily turn to the operator for instructions for folks who would like to call in questions.

(Operator): Thank you. If you would like to ask a question over the phone line, please press star one on your telephone. Please record your name clearly when prompted. Once again, to ask a question, press star one and to withdraw your request, you may press star two. One moment please. (00:45:31)

Loretta Jackson Brown: This is Loretta. While we are waiting for questions from the operator, there is a question from the webinar. This is for Dr. McCabe. In addition to the Maryland Medical Reserve Corps now approving your project qualified applicants as paraprofessional disaster volunteers, can you point to any other examples in your study leading to policy and practice changes? (00:46:07)

Dr. Links: Thank you. That is an excellent question. One of our local health department emergency planners has developed a prototype policy change that other local department emergency planners are interested in whereby she extracted the information on strengths and weaknesses and especially the resource surpluses in given communities that engaged in the planning process, and incorporated that contact information and all of the information about access that would be available or that would be needed in the event of a disaster, into her own emergency operations plan as a kind of annex. We think that is an excellent idea, generally, for generalization to other local health departments. This work was engaged in now she is able to have, at a glance, aggregated information from the 11 communities that engaged in the planning process. I also happen to know that during the H1N1 episode and era she used her contacts with the faith organization to distribute health information at facilities owned by the faith organizations. (00:47:45)

Loretta Jackson Brown: Thank you. Operator, do we have any questions?

(Operator): There are no questions at this time.

Loretta Jackson Brown: Okay, we have another question from the webinar for Dr. Barnett. What do you think are some policy in practice implications for your centers willingness to respond finding? And also, what are the biggest challenges to boosting willingness to respond among clinicians? (00:48:12)

Dr. Daniel Barnett: Thank you Loretta. That is an excellent question. I think in terms of policy, the national health security strategy currently is based on a presumption of a surge capacity that our findings are suggesting may not be as available as projections may envision. In any kind of emergency, especially one involving a pandemic or other large-scale event, it is an all hands on deck kind of situation. From a policy standpoint, a lot of jurisdictions have changed their contracts in terms of what they expect of new hires in terms of requiring them to be available and willing to come to work at odd hours that are not traditionally in the province of public health departments. That is an important policy issue at the local level. At the national level, as I mentioned, I think we need to think about perhaps revisiting some of the assumptions that are inherent in our planning projections. Factoring in attitudinal deficits that these findings reveal. (00:49:30)

Some of the biggest challenges in terms of implementation of the research have related to getting busy health departments on board to participate in this kind of research. We recruited these health departments during a pandemic, which you could not pick a worse time to recruit, but we were very fortunate that the health departments we were able to gather for our study really appreciated the value of this research, not just to bolster their agency's response, but also to give their employees a greater sense of their own relevance in the context of the agencies. This has dual use value and a lot of our practice partners have recognized that. We have been heartened by that. (00:50:16)

Finally, with regard to willingness to respond, there is always the tug of concerns about family and other conflicting obligations. And, that is why in the curriculum we have designed, we have explicitly included measures to make employees feel more comfortable and confident to show up to work. Every element of our curriculum is based on the behavioral model that I mentioned during my portion as well as research that we have done that indicates which are the most influential additional modifiers for response willingness. Personal and family preparedness is a very big factor in employees feeling safe and confident to come to work knowing that their families are as optimally protected in their absence as possible. (00:51:08)

Dr. John Links: This is John Links. I would like to bring us back to a broad view of the kinds of things we're talking about now. When we launched the webinar, we stated our focus on mental and behavioral health issues and disasters. It might be a little surprising that the webinar itself

has focused on important components of the Public Health Emergency Preparedness and Response System rather than on the public at large. Thinking about psychosocial trauma in the public is a very important component of thinking about mental and behavioral health issues and disasters. It is a component that has not been given the attention it is due. In our opinion, a component that has been given even less attention in the context of mental and behavioral health issues is those elements of the Public Health Emergency Preparedness and Response System that we count on to actually mount the response to disasters. So, the projects that we have spoken about in this webinar are our attempt to build the capacity of the Public Health Emergency Preparedness and Response System. In the context of willingness to respond, our interest is in the public health workforce, the public safety workforce including emergency medical services, and the hospital and healthcare workforce. We know that if we don't ensure optimum willingness to respond, we can do all the ability training in the world and our surge capacity will be limited. (00:53:01)

With respect to integration of the faith community, which is something every hospital can think about doing, as well as every local health department, what we are doing is training the faith community to be help extenders, if you will, the paraprofessionals that Lee spoke about. Which is another way of building capacity in the jurisdiction. So, when we think about mental and behavioral health issues, we do think about the public, but we also think at least as hard about the importance components of the Public Health Emergency Preparedness and Response System. (00:53:44)

Loretta Jackson Brown: Thank you. Dr. Leinhos, do you have any additional comments or questions from the webinar?

Dr. Mary Leinhos: Yes Loretta, this is Mary. We have two questions from Dr. R. Are the instruments and training manuals from these projects available? If they're not yet available, when do you anticipate that they might be available?

Dr. John Links: The instruments are not yet widely available to the public. Our goal absolutely positively, is that the instruments be available. What we are doing right now is what we consider still research, which is a combination of development and validation in an iterative fashion. We don't yet feel that the instruments are fully validated and thus ready to release publicly. By the end of the next budget year, we expect to have released the instruments. At that time, in addition to them being validated, they will be released in a format and form and in venues that facilitate their use without our participation. (00:55:10)

Dr. Mary Leinhos: Thank you, John. Le me ask an additional question of Dr. Barnett. You mentioned that the training curriculum is tailorable for different jurisdictions. Can you tell us a little bit more about that and perhaps give some examples of how it is tailorable? You mentioned that so far, the health departments that have participated in your study have not required much in

the way of customized modules but it might be helpful for our audience to know how it could be tailored for their particular jurisdiction. (00:55:44)

Dr. Daniel Barnett: Absolutely. In our curriculum, we encourage the trainers to use local examples of disasters to illustrate the key points and themes we are trying to get across. For example, if we were doing a training in Missouri, we would ask the trainer to use recent or even distant local public health emergencies to illustrate those points. That is an aspect of highly tailorable to a given jurisdiction. Additionally, if we find that a particular institution, let's say a hospital should we extend this to hospitals or a health department as we are currently working with, so we find that these agencies have a different pattern of gaps than most others, we absolutely can tailor and update the curriculum to address those specific gaps. Although de facto we have had a very consistent curriculum to date, that is not to say that we can't very easily modularize it and tailor it to address baseline gaps. (00:56:51)

Dr. John Links: Just to highlight a point that Dan made, we have now studied health departments, hospitals, EMS, the medical reserve corps, and some other settings. The fact of the matter is the factors that influence willingness to respond are highly consistent not only within a given setting like a health department, across health departments, but actually across settings. So, the factors that influence willingness in a health department are the same factors, it turns out empirically, that influence willingness in a hospital setting, in EMS, in the medical reserve corps and so on. Perhaps in retrospect this is not so surprising. After all, we are all human beings first. The things that drive us at a human level are what influence our attitudes and beliefs and those are the things that are influencing willingness. So, while it is true that the curriculum is flexible, adaptable, and customizable, in fact, one of our findings in preliminary form is that you don't need an adaptable curriculum. The same curriculum can be used across settings. Our next step is to take this intervention to the hospital setting where we believe it will have the same effect as it does in the public health and health department setting. That is great news because it means that when we turn over our tools to the public, if you will, and take ourselves out of the picture, those tools will have enduring value and purpose across a variety of settings. (00:58:46)

Dr. Mary Leinhos: Thank you very much, John. Let me take this opportunity to ask the operator, Brenda, if there are any caller questions on the line?

Brenda (Operator): There are no questions at this time.

Dr. Mary Leinhos: All right. Let me ask an additional question for Dr. McCabe. You mentioned from one of your cohorts of completers of the training program that only about a third of them ended up applying for the Maryland professional volunteer corps. Did you get a sense of any concerns that they had about enrolling in the corps or any barriers to their volunteer enrollment? If so, are there any ways you think we might be able to facilitate enrollment by more paraprofessional providers? (00:59:31)

Dr. Lee McCabe: The cohort that I provided the data on was the first rural cohort that we did. Subsequently we have done another one and more than 70% of the participants in that particular training that day volunteer to be part of the medical reserve corps. We are not sure if that reflects a selection factor. We were working with different people at the time so that dramatic uptick in percent of people interested in applying to the corps is something we try to understand ourselves. It looks like with every training, I am not sure if it is because of the quality of the training or the fact that we have actually at the training now, representatives from the state MRC there to provide applications, whether that is making a difference or not. Our conclusion at the moment is that the majority of people trained in psychological first aid the way we are delivering it, the majority is willing to be a responder and are potentially deployable by their local MRC. (01:01:04)

Dr. Mary Leinhos: Thank you, Lee.

Operator, are there any caller questions?

Brenda (Operator): There are no questions.

Dr. Mary Leinhos: All right. Let me ask Dr. McCabe one more question. One of your slides showed that some of the participants had a difficult time distinguishing between the good and inadequate preparedness plans. To have a sense of why that might be or were there particular elements that they had trouble recognizing? (01:01:36)

Dr. Lee McCabe: They tended to, again what we provided in that slide was the early work that we had a table prepared for and what we have learned is that if you couch the information in the curriculum in a different way, you can affect rather dramatic changes in any kind of data that you were initially disappointed with. Also, we have also learned that if you induce the role for the participant in a little bit more of a specific way, then you get a better sense of cooperativeness from the participant with respect to all of the intended objectives in your program.

Recently, our work in Iowa for example, shows us that if you reduce the actual amount of time presenting slide material and convert the approach more to a workshop with a very specific product that is producing a plan in mind at the end of the day, and if you work in more of an interactive way with the planners, that is reviewing their plans mid day and three quarters of the way through the day as opposed to taking a more didactic approach and then hoping they produced a plan, it is a more effective way of having the product developed and having people feel that they did a good job engaging in the process. (01:03:31)

Dr. Mary Leinhos: Thank you, Lee. Operator, do we have any questions on the line?

Brenda (Operator): There are no questions. I can remind everyone to press star one if they wish to ask a question.

Dr. Mary Leinhos: Thank you. I will have one last question I will ask for Dr. Barnett. During your presentation, you shared some success stories. Do you have any lessons learned from the research activities that you conducted so far in terms of encountering and addressing any barriers or challenges to implementing the training curriculum? (01:04:08)

Dr. Daniel Barnett: Sure. That's a good question, Mary. In terms of the biggest barriers, I think for local health departments specifically, time is a barrier. We have tried to create a curriculum that can be rolled out over a six month period of time, comprising a total of seven hours of learning time. That actually we found to be a very appropriate pace and volume for these very busy agencies. When we eventually plan to modify this for hospital settings, for example, we have spoken to colleagues at Johns Hopkins Hospital and they provided feedback that this is indeed quite modifiable to address the time constraints of a hospital setting as well. We are cognizant of the time factor as a barrier.

Another interesting thing that we found as a byproduct of our research is that certain individuals have historically felt their roles to be marginal in agencies, public health departments, specifically clerical and support staff. These are individuals who answer their phones as their primary roles but they are actually also on the frontlines of risk communication. One of the exciting aspects of our research has been to reinforce or to create an understanding in their minds of the critical importance of their roles. In addition to the work that clinical colleagues do within their agencies, ancillary staff have a vital role to play. That is why we encourage agency and institution wide training rather than just siloed training for a given department. (01:05:53)

Dr. Mary Leinhos: Thank you very much, Dan. Let me check in with the operator again. Brenda, do we have any callers with questions?

Brenda (Operator): There are no questions at this time.

Dr. Mary Leinhos: Loretta, do you have any additional questions or closing remarks?

Loretta Jackson Brown: Yes. On behalf of COCA, I would like to thank everyone for joining us today. With a special thank you to our presenters, Doctors Links, Barnett, and McCabe, and today's moderator, Dr. Leinhos.

If you have additional questions for today's presenters, please e-mail us at COCA@CDC.gov. Put Dr. Links, Barnett or McCabe's name in the subject line of your email and we will ensure that your question is forwarded to them for a response. Again that email address is COCA@CDC.gov.

The recording of this call and transcript will be posted to our COCA website at emergency.CDC.gov/COCA within the next few days. In addition, additional resources are available on our website relating to the journal articles discussed and links to CDCs Preparedness

and Emergency Response Research Center and Johns Hopkins Preparedness and Response Research Center.

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Thank you again for being a part of today's COCA webinar. Have a great day. (01:08:41)

Brenda (Operator): Thank you for your participation in today's call. You may disconnect your phone lines at this time.

 [Event concluded]